

REMARKS

In paragraph 3, Claims 33-37, 41-43, 45, 94-99, 101-103 and 105-109 were rejected under 35 USC 103(a) as being unpatentable over Monacelli (USP 5,752,994) in view of Mansour (USP 5,306,481) and Atwell (USP 2,680,065).

In paragraph 4 of the office action, claims 33 and 94 were rejected under 35 USC 103(a) as being unpatentable over Ashworth (USP 4,097,361) in view of Mansour.

In paragraph 5 of the office action, claims 38, 100 and 110 were rejected under 35 USC 103(a) as being unpatentable over Monacelli, Mansour and Atwell as applied to claims 19, 33, 94 and 106, and further in view of Tanca (USP 5,624,470).

In paragraph 6 of the office action, claims 115-117 were rejected under 35 USC 103(a) as being unpatentable over Monacelli, Mansour and Atwell as applied to claims 33, 94 and 106, and further in view of Ashworth.

Claims 33-38, 41-43, 45, 94-103, 105-110, 115-117 and new claims 118-120 are being submitted for the Examiner's consideration, in light of the amendments made herein and the remarks below.

Amendments to the Claims

Independent claims 33, 94 and 106 have been amended to recite that the solids collection reservoir is separate from the fluidized bed. Support for this language can be found in the original specification at page 24, lines 24-25, which says that the "carbon trim cell 40 is shown separate from the thermochemical apparatus 10" (which comprises the fluidized bed 14).

New dependent claims 118-120 recite that the solids collection reservoir is operated as a fixed bed. Support for the language that the solids collection reservoir is operated as a fixed bed can be found in the specification at, e.g., page 25, lines 15-17: "The bed drain nozzle, as mentioned above, may operate as a fluidized bed or a fixed bed. Further the process may be carried out in a batchwise manner or in a continuous manner."

Patentability of Independent Claims 33, 94 and 106

It is submitted that neither Monacelli nor Ashworth, the two primary references applied against the independent claims, disclose a solids collection reservoir located below the bottom portion (of the fluidized bed) and separate from the fluidized bed, in combination with the remaining elements of these claims. Monacelli's Fig. 3 shows that the "solids collection reservoir 76" identified by the Examiner in the office action is not separate from the fluidized bed 54. Ashworth's Fig. 2 shows that the "solids collection reservoir 40" identified by the Examiner in the office action clearly is not shown to be "located below the bottom portion" (of the fluidized bed). Accordingly, it is submitted that independent claims 33, 94 and 106 all define over the combinations of references applied against them.

New Dependent Claims 118-120

With respect to new dependent claims 118-120, it is submitted that neither Monacelli nor Atwell disclose a "solids collection reservoir" that is configured as a "fixed bed". In this regard, it is first noted that one skilled in the art would not operate Monacelli's "lower fluidized bed 76" as a fixed bed. This is because Monacelli's two fluidized beds 54 and 76 operate in series with respect to gas flow (col. 6, lines 2-3). The primary intent of lower fluidized bed 76 is to heat the fluidization medium 19 to the temperature of the upper fluidized bed 54 by employing a heat exchanger 78. This requires that lower fluidized bed 76 be a fluid bed and not a fixed bed for satisfactory heat transfer. In a similar vein, Atwell employs two fluidized beds 37 and 44, and the incorporation of heat exchanger 57 in the second fluidized bed 44 mandates a fluidized bed, rather than fixed bed to promote good heat exchange. Thus, no combination of Monacelli and Atwell would motivate one skilled in the art to replace the second fluidized bed 76 (Monacelli) and 44 (Atwell) with a fixed bed.

With respect to all claims not specifically mentioned, it is submitted that these are patentable not only by virtue of their dependency on their respective base claims and any intervening claims, but also for the totality of features recited therein.

Reconsideration of the application is requested. All pending claims are believed to be allowable over the prior art of record. An early notice of allowance is solicited so that the application may proceed to issue.

The Director is authorized to charge any required fees, including extension of time fees, to Womble Carlyle's Deposit Account No. 09-0528 (T127 1010.1).

Respectfully Submitted,

Date: 21-Aug-2009

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